

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.

1924



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,110	08/16/2001	Matthew D. Birder	15437-0545	6768
29989	7590	07/29/2004	EXAMINER	
HICKMAN PALERMO TRUONG & BECKER, LLP 1600 WILLOW STREET SAN JOSE, CA 95125			HUYNH, THU V	
			ART UNIT	PAPER NUMBER
			2178	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/932,110	<b>Applicant(s)</b> BIRDER, MATTHEW D.	
	<b>Examiner</b> Thu V Huynh	<b>Art Unit</b> 2178	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is responsive to communications: application filed on 08/16/2001.
2. Claims 1-32 are pending in the case. Claims 1 and 17 are independent claims.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 6-7 and 22-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

Regarding dependent claims 6 and 22, which is dependent on claim 4. Claim 6 recites the limitation of “in response to a determination that said first document does not comprise said matching data structure pattern, inserting a non-match template comprising one or more actions into said transformation document, said non-match template being invoked when a particular triggering data structure pattern is encountered during processing of said transformation document, and when invoked, cause said particular data structured pattern to be create in said result document” renders the claim not enable.

Refer to specification page 6, lines 1-14, the specification discloses that if source document does not comprise a literal or a synonym matching data structure pattern that match a particular data structure pattern in target, generating a non-match template contains special

Art Unit: 2178

triggering pattern in a transformation document so that the non-template will cause the particular pattern to be created in a result document when transformation process.

However, in Examiner's point of view, this is not enablement. The particular pattern in the target document will never be created in a result document because when the source document does not comprise literal or synonym matching of particular data structure in the target document, this means that a non-matching particular data structure pattern does not exist in the source document. Therefore, when applying the transformation to source document, the non-matching particular data structure pattern that does not exist cannot be used to invoke the non-matching template.

Dependent claims 7 and 23 are rejected for fully incorporating the dependencies of their bases.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 6-7 and 22-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Regarding dependent claims 6 and 22**, which is dependent on claim 4. Claim 6 recites the limitation of "in response to a determination that said first document does not comprise said matching data structure pattern, inserting a non-match template comprising one or more actions into said transformation document, said non-match template being invoked when a particular triggering data structure pattern is encountered during processing of said transformation

Art Unit: 2178

document, and when invoked, cause said particular data structured pattern to be create in said result document” renders the claim is vague and indefinite.

The use of “said non-match template being invoked when a special triggering data structure pattern is encountered during processing of said transformation document” is unclear. Since “first document does not comprise said matching data structure pattern” that match said particular data structure pattern in the second document (also see claim 4, which claim 6 is dependent on), the non-match template will never be invoked during applying said transformation document to first document because first document does not contains non-matching data structure pattern.

Moreover, if the non-match template is invoked, the claim of “when invoked, cause said particular data structured pattern to be create in said result document” is also indefinite. Since “first document does not comprise said matching data structure pattern” that match said particular data structure pattern in the second document, the first document does not contain non-matching pattern. Therefore, when applying the transformation to first document, the particular data structure pattern cannot be created in said result because there is not exist the non-matching data structure pattern in the first document.

Dependent claims 7 and 23 are rejected for fully incorporating the dependencies of their bases.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2178

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**8. Claims 1-8, 14-16, 17-24 and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Worden, US 2003/0149934 A1, filed 05/2001.**

**Regarding independent claim 1**, Worden teaches the steps of:

- analyzing a first document (Worden, page 3, paragraphs 38- 39; analyzing first XML document for mapping process);
- analyzing a second document (Worden, page 3, paragraphs 38-39; analyzing second XML document for mapping process); and
- automatically generating, based upon said first and second document, a transformation document which, when processed in conjunction with said first document gives rise to a result document that is at least an approximation of said second document (Worden, page 3, paragraphs 39-41; automatically generating a transformation document (XSLT) to translate the first XML document or a document in first XML language to a document in second XML document).

**Regarding dependent claim 2**, which is dependent on claim 1, Worden teaches the limitations of claim 1 as explained above. Worden teaches wherein said first and second document are XML (eXtensible Markup Language) documents (Worden, page 3, paragraph 39; first and second document are XML document).

Art Unit: 2178

**Regarding dependent claim 3**, which is dependent on claim 2, Worden teaches the limitations of claim 2 as explained above. Worden teaches wherein said transformation document is an XSLT (eXtensible Stylesheet Language Transformation) document (Worden, page 3, paragraphs 39-40; transformation document is XSLT document).

**Regarding dependent claim 4**, which is dependent on claim 1, Worden teaches the limitations of claim 1 as explained above. Worden teaches wherein automatically generating said transformation document comprises:

- selecting a particular data structure pattern that occurs in said second document (Worden, page 3, paragraph 38; page 13, paragraph 239; and page 16, paragraph 298; a particular data structure in the second XML document must be selected to map XML objects, such as element types, attributes and content model links between two XML documents);
- determining whether said first document comprises a matching data structure pattern that matches said particular data structure pattern (Worden, page 3, paragraph 38; page 13, paragraph 239; and page 16, paragraph 298; determining matching data to map XML objects, such as element types, attributes and content model links between two XML documents in to a MDL file); and
- in response to a determination that said first document comprises said matching data structure pattern, inserting a template comprising one or more actions into said transformation document, said template being invoked when a particular triggering data structure pattern is encountered during processing of said transformation

document, and when invoked, cause said particular data structured pattern to be create in said result document (Worden, page 13, paragraph 239; page 17, paragraphs 304-305; page 40, 851; and appendix A; based on mapping results, automatically generating XSLT transformation document consisting templates which contain one or more actions, said template being invoked when “<xsl:template match = “/schools3”>” trigger pattern is encountered during applying the transformation document to the first XML document to provide a document in second XML language document).

**Regarding dependent claim 5**, which is dependent on claim 4, Worden teaches the limitations of claim 4 as explained above. Worden teaches said particular triggering data structure pattern comprises said matching data structured pattern (Worden, appendix A, triggering pattern comprises attribute “school3” in the first XML document).

**Regarding dependent claim 6**, which is dependent on claim 4, Worden teaches the limitations of claim 4 as explained above. Worden teaches wherein automatically generating said transformation document comprises:

- in response to a determination that said first document does not comprise a non-matching data structure pattern that does not match any data structure pattern that occurs in said second document, inserting a non-match template comprising one or more actions into said transformation document, said non-match template being invoked when a particular triggering data structure pattern is encountered during

processing of said transformation document, and when invoked, cause said particular data structured pattern to be create in said result document (Worden, page 41, paragraphs 897-902, if missing mapping of an element between two XML language document occurs, creating the XSLT which outputs a warning message for user enters a mapping for the element. This inherently discloses that the XSLT document must include a template comprising action needs to provide message for the user when transformation process).

Note that this claim is rejected under 35 U.S.C. 112, first and second paragraphs as explained above. In order to exam this case and this particular claim, examiner changed the claim limitation.

**Regarding dependent claim 7**, which is dependent on claim 6, teaches the limitations of claim 6 as explained above. Worden teaches wherein said special triggering data structure pattern comprises an indication that a triggering data structure pattern needs to be specified for said non-match template (Worden, page 41, paragraphs 897-902, if missing mapping of an element between two XML language document occurs, creating the XSLT which outputs a warning message for user enters a mapping for the element. This inherently discloses that the XSLT document must include a template comprising action needs to provide message for the user when transformation process and the triggering data structure pattern must be included an indication of missing mapping occurs).

**Regarding dependent claim 8**, which is dependent on claim 4, Worden teaches the limitations of claim 4 as explained above. Worden teaches wherein automatically generating said transformation document comprises:

- selecting a non-matching data structure pattern that occurs in said first document that does not match any data structure pattern that occurs in said second document (Worden, page 41, paragraphs 897-901, if missing mapping of an element between two XML language document occurs); and
- inserting an action-needed template into said transformation document, said action-needed template being invoked when said non-matching data structure pattern is encountered during processing of said transformation document, said action-needed template comprising an indication that one or more action needs to specified for said action-needed template (Worden, page 41, paragraphs 897-902, if missing mapping of an element between two XML language document occurs, creating the XSLT which outputs a warning message for user enters a mapping for the element. This inherently discloses that the XSLT document must include a template comprising action needs to provide message for the user when transformation process).

**Regarding dependent claim 14**, which is dependent on claim 1, Worden teaches the limitations of claim 1 as explained above. Worden teaches the steps of wherein analyzing said first document comprises: compiling a first list of data structure patterns that occur in said first document (Worden, page 3, paragraphs 38, 239, 243, 245, 248, and 301); and wherein analyzing

Art Unit: 2178

said second document comprises: compiling a second list of data structure patterns that occur in said second document (Worden, page 3, paragraphs 38, 239, 243, 245, 248, and 301).

**Regarding dependent claim 15**, which is dependent on claim 1, Worden teaches the limitations of claim 1 as explained above. Worden teaches processing said transformation document in conjunction with a third document to derive a transformed document, wherein said third document is a different document from said first document (Worden, page 3, paragraphs 39-41; automatically generating a transformation document (XSLT) to translate the first XML document or a document in first XML language (third document) to a document in second XML document).

**Regarding dependent claim 16**, which is dependent on claim 15, Worden teaches the limitations of claim 15 as explained above. Worden teaches wherein said first document is of a particular type, and wherein said third document is of the same particular type (Worden, page 3, paragraphs 39-41; the first XML document in a first XML based language and the third document is also a first XML based language).

**Claims 17-24 and 30-32** are for a computer system performing the method of claims 1-8 and 14-16, respectively and are rejected under the same rationale.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2178

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**10. Claims 9-11 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worden as applied to claims 1 and 17 above, and further in view of Wheeler et al., US 2002/0055932 A1, filed 08/06/2001.**

**Regarding dependent claim 9**, which is dependent on claim 1, Worden teaches the limitations of claim 1 as explained above. Worden teaches wherein automatically generating said transformation document comprises:

- selecting a particular data structure pattern that occurs in said second document  
(Worden, page 3, paragraph 38; page 13, paragraph 239; and page 16, paragraph 298;  
a particular data structure in the second XML document must be selected to map  
XML objects, such as element types, attributes and content model links between two  
XML documents); and
- in response to a determination that said first document comprises said matching data  
structure pattern inserting a template comprising one or more actions into said  
transformation document, said template being invoked when a particular triggering  
data structure pattern is encountered during processing of said transformation  
document, and when invoked, causes said particular data structure pattern to be  
created in said result document (Worden, page 13, paragraph 239; page 17,

paragraphs 304-305; page 40, 851; and appendix A; based on mapping results, automatically generating XSLT transformation document consisting templates which contain one or more actions, said template being invoked when “<xsl:template match = “/schools3”>” trigger pattern is encountered during applying the transformation document to the first XML document to provide a document in second XML language document).

Worden does not explicitly disclose the steps of: determining a synonymous data structure pattern that is synonymous with said particular data structure pattern selecting a particular data structure pattern that occurs in said second document; and determining whether said first document comprises a matching data structure pattern that matches said synonymous data structure pattern.

Wheeler teaches:

- determining a synonymous data structure pattern that is synonymous with said particular data structure pattern selecting a particular data structure pattern that occurs in said second document (Wheeler, page 3, paragraph 20; using synonym table lookup to determine data structure matching between source and target document); and
- determining whether said first document comprises a matching data structure pattern that matches said synonymous data structure pattern (Wheeler, page 3, paragraph 20 and page 9, paragraph 80; accessing a synonym table lookup to determine data structure, such as element or attribute in the source document that matches the data structure in the target document for mapping).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Wheeler's comparison technique into Worden to facilitate the mapping process, since many of comparison techniques, such as using synonym table lookup, extract string match, similarly match, etc. can be applied into XML document for mapping and transforming documents as Wheeler disclosed (Wheeler, page 3, paragraph 20 and page 7, paragraphs 65-68 and figures 7A).

**Regarding dependent claim 10**, which is dependent on claim 9, Worden and Wheeler teach the limitations of claim 9 as explained above. Worden teaches said particular triggering data structure pattern comprises said matching data structured pattern (Worden, appendix A, triggering pattern comprises attribute "school3" in the first XML document).

**Regarding dependent claim 11**, which is dependent on claim 9, Worden teaches the limitations of claim 9 as explained above. Refer to the rationale relied to reject claim 9, the limitations of "accessing a set of information that indicates that said particular data structure pattern is synonymous with said synonymous data structure pattern" must be included in order to match pattern in mapping process. The rationale is incorporated herein.

**Claims 25-27** are for a computer system performing the method of claims 9-11, respectively and are rejected under the same rationale.

11. **Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

Art Unit: 2178

**Worden further in view of Wheeler as applied to claims 11 and 27 above, and further in view of Weinberg et al., US 2002/0194196 A1, priority filed 10/2000.**

**Regarding dependent claim 12**, which is dependent on claim 11, Worden teaches the limitations of claim 11 as explained above. Worden teaches wherein said set of information is provided by a user.

Weinberg teaches transform tool allows a user modifies table lookup to create additional relationships of a data source (Weinberg, page 4, paragraph 44).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Weinberg's transform tool into Worden and Wheeler's synonym table lookup to allow the user to add new words (patterns or synonyms), update information and/or create additional relationships in the table lookup, since modified table lookup would have provided accurately matching process. It is noted that modifying a dictionary by adding and/or deleting new words was well known in the art.

**Claim 28** is for a computer system performing the method of claim 12, and is rejected under the same rationale.

12. **Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worden as applied to claims 1 and 17 above, and further in view of Wheeler et al., US 2002/0055932 A1, filed 08/06/2001 and Menke, US 2002/0123878 A1, filed 02/2001.**

**Regarding dependent claim 13**, which is dependent on claim 1, Worden teaches the limitations of claim 1 as explained above. However, Worden does not explicitly disclose the

Art Unit: 2178

match is identical match and the action is a copy action that cause the particular data structure pattern to be copied into said result document.

Wheeler teaches comparison techniques include identical match, similar match and no match for mapping and transformation documents (Wheeler, page 3, paragraph 20 and page 7, paragraphs 65-68 and figures 7A).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Wheeler's comparison technique into Worden to facilitate the mapping process, since many comparison techniques can be applied into XML document for mapping and transforming documents as Wheeler disclosed (Wheeler, page 3, paragraph 20 and page 7, paragraphs 65-68 and figures 7A).

Menke teaches XSLT stylesheet includes templates, said template comprising actions wherein a copy action used to copy matching element in to a destination document (Menke, page 5, paragraph 47 and fig.1).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Menke's copy action into Menke to copy the particular data structure pattern into said result document when the first (source) and second (target) documents have identically particular data structure pattern, since copy action would have reproduced that particular data structure in the result document for transforming the first document to the result document that is at least an approximation of the second document.

**Claim 29** is for a computer system performing the method of claim 13, and is rejected under the same rationale.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Su et al., US 2003/0167445 A1, filed 03/2002, teaches method of document transformation between a source XML schema and target XML schema.

Gharavy, US 2003/0074181 A1, filed 06/2001, teaches extensibility and usability of document and data representation languages.

Sundaresan, US 6,487,566 B1, filed 10/1998, teaches transforming document using pattern matching and a replacement language.

Cheng, US 2002/01845245 A1, filed 03/2001, teaches stylesheet transformation driven firewall access list generation.

Brooke et al., US 6,748,569, filed 09/1999, teaches XML server pages language.

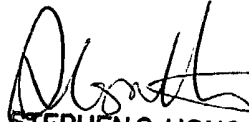
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu V Huynh whose telephone number is 703-305-9774. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S Hong can be reached on 703-308-5465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2178

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVH  
July 21, 2004



STEPHEN S. HONG  
PRIMARY EXAMINER